

**APPENDIX II**

Serial No.: 09/955,604

Docket No.: 49933US032

---

Communication filed with the U. S. Patent and Trademark Office on September 19, 2001.

PATENT

Docket No. 49933US032

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): HOOPMAN et al. ) Group Art Unit:  
 ) Group Art Unit of Parent: 1722  
 )  
Serial No.: Unassigned ) Examiner: Unknown  
Serial No. of Parent: 09/520,032 ) Examiner of Parent: Joseph Leyson  
 )  
Confirmation No.: Unknown )  
 )  
Filing Date: Herewith )  
Filing Date of Parent: March 6, 2000 )  
 )  
For: **TOOLS TO MANUFACTURE ABRASIVE ARTICLES**

**COMMUNICATION**

Assistant Commissioner for Patents  
Attn: Box Patent Application  
Washington, D.C. 20231

Sir:

Prior to taking up the above-identified patent application, the Examiner is requested to consider the accompanying remarks. The pending claims are claims 23-24, 30-32, 56-57, 63-64, 89-90, 92-93, 113-114, and 133-153. Support for these claims can be found throughout the specification, including the originally filed claims and drawings, as would be clearly understood by one of skill in the art. Examples of locations of support for these new claims are listed in the table below.

Claim 1-21	Support can be found, e.g., in the originally filed claims in the parent application Serial No. 09/520,032 (filed March 6, 2000).
Claim 22	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; and at page 26, line 16 through page 27, line 7.
Claim 23	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page

**Communication**

Serial No.: Unassigned

Filed: Herewith

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 2 of 13

	10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; and at page 26, line 16 through page 27, line 7.
Claim 24	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; and at page 26, line 16 through page 27, line 7.
Claim 25	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; and at page 26, line 16 through page 27, line 7.
Claim 26	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; and at page 26, line 16 through page 27, line 7.
Claim 27	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; and at page 26, line 16 through page 27, line 7.
Claim 28	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 20, line 27 through page 21, line 18; and at page 26, line 16 through page 27, line 7.
Claim 29	Support can be found, e.g., at page 6, lines 18-25; at page 10, lines 5-10; at page 11, lines 19-28; at page 21, lines 19-26; and at page 26, line 16 through page 27, line 7.
Claim 30	Support can be found, e.g., at page 6, line 18 through page 7, line 15; and at page 26, line 16 through page 27, line 7.
Claim 31	Support can be found, e.g., at page 6, line 18 through page 7, line 15; and at page 26, line 16 through page 27, line 7.
Claim 32	Support can be found, e.g., at page 6, lines 18-25; at page 7, lines 6-15; at page 26, line 16 through page 27, line 7; and in originally filed claim 1.
Claim 33-43	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 22-32.
Claim 44-54	Support can be found, e.g., at page 28, lines 12-17; and above with respect to

**Communication**

Serial No.: Unassigned

Filed: Herewith

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 3 of 13

	claims 22-32.
Claim 55	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 56	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 57	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 58	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 59	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 60	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 61	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 19, lines 14-20; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 62	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 10, lines 5-10; at page 11, lines 19-28; at page 21, lines 19-26; and at page 26, line 16 through page 27, line 7; and in originally filed claim 6.

**Communication**

Serial No.: Unassigned

Filed: Herewith

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 4 of 13

Claim 63	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 64	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 26, line 16 through page 27, line 7; and in originally filed claim 6.
Claim 65	Support can be found, e.g., at page 6, lines 18 through page 8, line 24; at page 26, line 16 through page 27, line 7; and in originally filed claims 1 and 6.
Claim 66-76	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 55-65.
Claim 77-87	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 55-65.
Claim 88, 91	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 89, 92	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 90, 93	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 94	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 95	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 96	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through

	page 21, line 18; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 97	Support can be found, e.g., at page 6, lines 18-25; at page 10, lines 5-10; at page 11, lines 19-28; at page 21, lines 19-26; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claims 98-104	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 91-97.
Claims 105-111	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 91-97.
Claim 112	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 113	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 114	Support can be found, e.g., at page 6, line 18 through page 8, line 24; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 115	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 116	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 117	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 20, line 27 through page 21, line 18; at page 26, line 16

**Communication**

Serial No.: Unassigned

Filed: Herewith

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 6 of 13

	through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 118	Support can be found, e.g., at page 6, lines 18-25; at page 7, line 16 through page 8, line 24; at page 10, lines 5-10; at page 11, lines 19-28; at page 21, lines 19-26; and at page 26, line 16 through page 27, line 7; in originally filed claim 6; and at page 10, lines 23-27.
Claim 119-125	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 112-118.
Claim 126-132	Support can be found, e.g., at page 28, lines 12-17; and above with respect to claims 112-118.
Claim 133	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 134	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 135	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 136	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 137	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 138	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16

	through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 139	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 140	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 141	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 142	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 143	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 144	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 145	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 146	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 147	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page



	10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 148	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 149	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 150	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 151	Support can be found, e.g., at page 6, lines 18-25; at page 7, lines 6-15; at page 26, line 16 through page 27, line 7; and in originally filed claim 1.
Claim 152	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 153	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.

**Remarks**

In the parent application, Serial No. 09/520,032, filed March 6, 2000, claims 14-16, 18, 22-24, 29-32, 88-93, and 97 were rejected under §102(e) in view of Calhoun et al. (U.S. Patent No. 5,437,754). Such claims are being re-presented herein as claims 14-16, 18, 22-24, 29-32, 88-93, and 97, respectively, except claims 14-16, 18, 22, 29, 88, 91, and 97 have been cancelled in the accompanying Request for Filing a Continuation Application, and the following claims have been amended: 30 (to recite a third group of cavities having a third shape), 31 (to recite a third

group of cavities having a third size), 32 (to recite a third cavity having third dimensions). Additional amendments have been made, the majority of which are primarily typographical in nature.

Also being presented are new claims 133-148, which are directed to a production tool, as well as former claims 56-57, 63-64, and 113-114, which are all independent claims directed to a method of making a production tool, and new claims 149-153, which are also method claims.

In view of the §102(e) (anticipation) rejection in the parent application based on Calhoun et al. the following comments are being provided to explain why a §102(e) (anticipation) rejection based on Calhoun et al. would not be proper for the instant claims.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. §2131 (quoting Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." M.P.E.P. §2131 (quoting Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)).

"The standards of anticipation are strict. The invention must be disclosed within the four corners of a single reference. If a reference is silent or ambiguous with respect to an element or feature of the invention, that gap cannot be filled by an assumption or by combining one reference with another. An anticipating reference must teach the invention. It is not sufficient to point to silence or ambiguity after the invention and argue that the invention could be made out from the reference." Plastering Development Center, Inc. v. Perma Glas-Mesh Corp., 371 F.Supp. 939, 943, 944, 179 USPQ 838, 841 (N.D. Ohio 1973) (quoting General Tire & Rubber Co. v. The Firestone Tire & Rubber Co., 349 F.Supp. 345, 356, 174 USPQ 427, 442, 443 (N.D. Ohio 1972)). Anticipation cannot be predicated on teachings in a reference that are vague or based on conjecture. W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303 (Fed. Cir. 1983).

“Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.” Jamesbury Corp. v. Litton Industrial Products, 756 F.2d 1556, 1560, 225 USPQ 253, 256 (Fed. Cir. 1985) (quoting Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983)); Soundsciber Corp. v. U.S., 175 Ct.Cl. 644, 360 F.2d 954, 960, 148 USPQ 298, 301 (1966). A prior art disclosure that ‘almost’ meets that standard may render the claim invalid under §103; it does not ‘anticipate.’ Jamesbury Corp. v. Litton Industrial Products, 225 USPQ 253, 256 (Fed. Cir. 1985) (quoting from Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983)).

Although Calhoun et al. do generally disclose a production tool having three-dimensional cavities that can be of different sizes and/or shapes, such shapes being truncated cones, truncated pyramids, cubes, cylinders, elongated troughs, chevrons, intersecting grooves, hemispheres, and combinations thereof, there is no specific disclosure of Applicants’ invention as claimed. For example:

Calhoun et al. do not specifically teach the presence of at least three pluralities of cavities having a plurality of angles forming a geometric shape, wherein at least one of the angles of the first plurality is different from all the angles of each of the second and third plurality of angles, and at least one of the angles of the second plurality is different from all the angles of each of the first and third plurality of angles (see claims 23 and 56).

Calhoun et al. do not specifically teach the presence of at least four pluralities of cavities having a plurality of angles forming a geometric shape, wherein at least one of the angles of the first plurality is different from all the angles of each of the second, third, and fourth plurality of angles, at least one of the angles of the second plurality is different from all the angles of each of the first, third, and fourth plurality of angles, and at least one of the angles of the third plurality is different from all the angles of each of the first, second, and fourth plurality of angles (see claims 24 and 57).

Calhoun et al. do not specifically teach the presence of at least three pluralities of cavities having different shapes (see claims 30 and 63) or at least three pluralities of cavities having different

sizes (see claims 31 and 64).

Calhoun et al. do not specifically teach the presence of at least three cavities each having a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one cavity meet at an edge to define an angle of intersection therebetween, wherein at least one angle of intersection of the first cavity is different from all the angles of intersection of the second and third cavities, and at least one angle of intersection of the second cavity is different from all the angles of intersection of the first and third cavities (see claims 32 and 151).

Calhoun et al. do not specifically teach the presence of at least three pluralities of cavities having a plurality of base edge lengths forming the base of a geometric shape, wherein at least one of the base edge lengths of the first plurality is different from all the base edge lengths of each of the second and third plurality of base edge lengths, and at least one of the base edge lengths of the second plurality is different from all the base edge lengths of each of the first and third plurality of base edge lengths (see claims 92 and 113).

Calhoun et al. do not specifically teach the presence of at least four pluralities of base edge lengths forming the base of a geometric shape, wherein at least one of the base edge lengths of the first plurality is different from all the base edge lengths of each of the second, third, and fourth plurality of base edge lengths, at least one of the base edge lengths of the second plurality is different from all the base edge lengths of each of the first, third, and fourth plurality of base edge lengths, and at least one of the base edge lengths of the third plurality is different from all the base edge lengths of each of the first, second, and fourth plurality of base edge lengths (see claims 93 and 114).

Calhoun et al. do not specifically teach the presence of at least three rows of cavities each having a geometric shape including a base and a plurality of base edge lengths forming the base, wherein at least one of the base edge lengths of the first row of cavities is different from all the base edge lengths of each of the second and third row of cavities, and at least one of the base edge lengths of the second row of cavities is different from all the base edge lengths of each of

the first and third row of cavities (see claims 136 and 152).

Calhoun et al. do not specifically teach the presence of at least three cavities each of which has a geometric shape including a base and a plurality of base edge lengths forming the base, wherein at least one of the base edge lengths of the first plurality is different from all the base edge lengths of each of the second and third plurality of base edge lengths, and at least one of the base edge lengths of the second plurality is different from all the base edge lengths of each of the first and third plurality of base edge lengths (see claims 143 and 153).

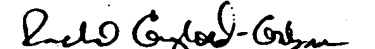
Thus, Calhoun et al. do not teach each and every element of Applicants' claims. That is, there are claim elements recited in Applicants' independent claims missing from Calhoun et al. Thus, it is respectfully submitted that Calhoun et al. is not suitable for use in an anticipation rejection; rather, it is at most (if even that) suitable for an obviousness rejection.

**CONCLUSION**

The application should now be in condition for examination and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

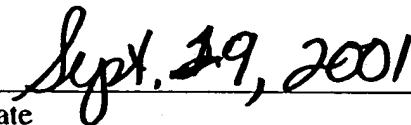
**CERTIFICATE UNDER 37 C.F.R. §1.10:**

The undersigned hereby certifies that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated below and is addressed to the Assistant Commissioner for Patents, Attn: Box Patent Application, Washington, D.C. 20231.

  
Rachel Gayland-Gebhardt

"Express Mail" mailing label number:  
EL888271625US

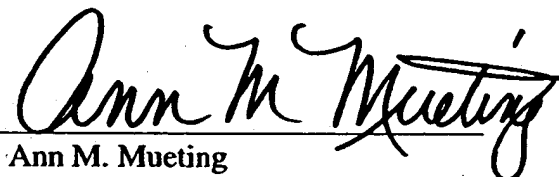
Date of Deposit: September 19, 2001

  
Date

Respectfully submitted for

**HOOPMAN et al.**

By  
Mueting, Raasch & Gebhardt, P.A.  
P.O. Box 581415  
Minneapolis, MN 55458-1415  
Telephone (612)305-1220  
Facsimile (612)305-1228  
Customer Number 26813

By:   
Ann M. Mueting  
Reg. No. 33,977  
Direct Dial (612)305-1217